

PARALLEL PRIMER EXTENSION APPROACH  
TO NUCLEIC ACID SEQUENCE ANALYSIS

ABSTRACT OF THE DISCLOSURE

A method of analyzing a polynucleotide of interest, comprising providing one or more sets of consecutive oligonucleotide primers differing within each set by one base at the growing end thereof; annealing a single strand of the polynucleotide or a fragment of the polynucleotide to the oligonucleotide primers under hybridization conditions; subjecting the primers to single base extension reactions with a polymerase and terminating nucleotides, the terminating nucleotides being mutually distinguishable; and observing the location and identity of each terminating nucleotide to thereby analyze the sequence or a part of the nucleotide sequence of the polynucleotide of interest, is disclosed. An apparatus comprising a solid support to which is attached at defined locations thereon one or more sets of consecutive oligonucleotide primers differing within each set by one base at the growing end thereof is also described.